

Appl. No. 10/820,020  
Amendment dated: May 29, 2007  
Reply to OA of: February 27, 2007

### **REMARKS**

Applicants have amended the claims to more particularly define the invention taking into consideration the outstanding Official Action. Applicants have amended claim 1 to correct an obvious typographical error. The word "button" was a typographical error for "bottom" which now appears in the claim. Applicants submit that all of the claims now present in the application are in full compliance with 35 USC 112 and supported by the specification as originally filed and no new matter is introduced.

Applicants most respectfully submit that all of the claims now present in the application are in full compliance with 35 USC 112 and clearly patentable over the references of record.

The rejection of claims 1, 2, 3, 4, 6 and 7 under 35 U.S.C. 103(a) as being unpatentable over Halldorson et al. in view of Pollock has been carefully considered but is most respectfully traversed in view of the following comments.

Applicants wish to direct the Examiner's attention to the basic requirements of a prima facie case of obviousness as set forth in the MPEP § 2143. This section states that to establish a prima facie case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Section 2143.03 states that all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an

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independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Applicants also most respectfully direct the Examiner's attention to MPEP § 2144.08 (page 2100-114) wherein it is stated that Office personnel should consider all rebuttal argument and evidence presented by applicant and the citation of In re Soni for error in not considering evidence presented in the specification.

Applicants most respectfully submit that after careful review of the Halldorson reference, it teaches away from the presently claimed invention. Halldorson discloses a two-stage system, the first stage is the oxidation reservoir 14, the second stage is the electrocoagulation reactor 190, and a pressure discontinuity means 28, 194 between the two stages to induce hydrodynamic cavitation in Fig. 23. Halldorson teaches "a sufficient residence time in reservoir 14" (col. 7, line 35) and an oxidizing agent (col. 7, lines 1-10) being introduced to the reservoir 14 to oxidize the contaminants.

The above-mentioned Halldorson's disclosure clearly suggests to one of ordinarily skilled in the art that one cannot conceive the reactor defined in claim 1 of the present application, because 1) the reservoir 14 has to be large enough to have a residence time long enough to oxidizing the contaminants; 2) the pressure discontinuity is to induce hydrodynamic cavitation and to create flocking of the oxidized compounds, so that the flocculated phase is distinct from the aqueous phase (col. 7, lines 36-41), consequently air is not suggested to introduced into the oxidized water exiting from the reservoir to destroy the phase separation, and a mixing device is not suggested to be disposed in the bottom of the reactor to destroy the phase separation; and 3) the pressure discontinuity means between the two stages is a must to induce hydrodynamic cavitation. Therefore, there is no motivation to isolate the electrocoagulation reactor 190 from the Halldorson's two-stage system and combine it with the air injection disclosed in Pollock, unless the Examiner uses our disclosure as hindsight. In re Fritch, 23 USPQ 1780, 1784(Fed Cir. 1992) ("It is impermissible to engage in hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps.).


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Therefore, there is no motivation to isolate the electrocoagulation reactor 190 from the Halldorson's two-stage system and combine it with the mixing zone (18) disclosed in Pollock, unless the Examiner uses Applicants disclosure as hindsight. Accordingly, it is most respectfully requested that this rejection be withdrawn.

The rejection of claims 5 and 8 under 35 U.S.C. 103(a) as being unpatentable over Halldorson in view of Pollock as applied to claim 1, and further in view of Serikawa has been carefully considered but is most respectfully traversed in view of the above comments. The teachings of the Serikawa reference does not overcome the deficiencies of the primary reference as discussed above. Accordingly, it is most respectfully requested that this rejection be withdrawn.

In view of the above comments and further amendments to claims, favorable reconsideration and allowance of all the claims now present in the application are most respectfully requested.

Respectfully submitted,  
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